Abstract

A functional unit in a digital system is provided with a rounding
Multiplication instruction, wherein a most significant product of first pair of
elements is combined with a least significant product of a second pair of
elements, the combined product is rounded, and the final result is stored in a
destination. Rounding is performed by adding a rounding value to form an
intermediate result, and then shifting the intermediate result right. A
combined result is rounded to a fixed length shorter than the combined
product.